United States District Court,
D. Massachusetts.

MACNEILL ENGINEERING COMPANY,
INC. Plaintiff.
v.
TRISPORT, LTD,
Defendant.

No. CIV.A. 98-12019-WGY

Jan. 10, 2001.

Owner of patent for removable sport shoe cleats sued competitor for infringement. After jury return verdict of non-infringement, owner moved for new trial. The District Court, Young, Chief Judge, held that court's clarification, upon direct question from jury, of ambiguity in claim construction that had hindered jury's determination of infringement, was not error warranting new trial.

Motion denied.

5,123,184. Cited.

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MEMORANDUM AND ORDER

YOUNG**, Chief Judge.**

I. INTRODUCTION

For some years now, the number of patent infringement cases filed in the District of Massachusetts has been so significant that the Clerk's office calculates what portion of our civil docket is devoted to patent infringement cases as an independent percentage. Now, since the Supreme Court's decision in Markman v. Westview Instruments, Inc., 517 U.S. 370, 116 S.Ct. 1384, 134 L.Ed.2d 577 (1996), *aff'g* 52 F.3d 967 (Fed.Cir.1995) (en banc), a considerably larger percentage of the Court's bench time is devoted to the

judicial hearings that were contemplated by that decision and that are now required as a practical matter in virtually every patent case before serious settlement negotiations can take place. *See* Melissa Paddock, *Claim Interpretation in the District of Massachusetts: A Survey of the Court's Procedure and Efficiency After* Markman 28-30 (Jan. 5, 1999), *in* J. Owen Forresster, Martha Vazquez, Ann C. Williams & William G. Young, *IP Litigation: The Judges Views, in Intellectual Property Leadership Forum, IP Strategies: Approaching the New Millennium* (Feb. 24-27, 1999) (lecture series); Richa Nand, *In Search of Uniformity and Efficiency in Patent Litigation-The Need for Mandatory Initial Disclosures, Rigid Time Frames and Interlocutory Appeals for* Markman *Hearings, in Federal Court Judicial Forum 2000,* at 399, 410-19 (MCLE 2000); *see also* N.D. Cal. Patent L.R. 4-1 to 4-6 (specifying procedures specific to claim construction).

Like every familiar type of case, courts that handle a significant number of patent cases soon develop routines for their just and efficient processing. This session of the Court is no exception, and this case has been processed in accordance with this Court's usual procedures. What is significant here is the extent to which what this Court considered "usual" or "routine" procedures actually implicate the most profound Constitutional values implicit in the right to trial by jury and the murky division of labor between jury and judge that flows from the teaching of *Markman*. *See* Margaret L. Moses, What the Jury Must Hear: The Supreme Court's Evolving Seventh Amendment Jurisprudence, 68 Geo. Wash. L.Rev. 183, 184, 217-47 (2000) (*Markman* ought be inapplicable outside the patent area). I shall try to make these points clear as I proceed.

MacNeill Engineering Co. ("MacNeill"), a manufacturer of spikes and cleats for athletic shoes, is based in Marlborough, Massachusetts. Trisport, Ltd. ("Trisport"), based in England, also manufactures traction cleats and receptacles for such cleats in golf shoes. This case involves U.S. Patent No. 5,036,606 (issued Aug. 6, 1991) (the " '606 patent"), owned by MacNeill, for cleats and receptacles for cleats, such as those typically used in golf shoes. MacNeill has sued Trisport, alleging patent infringement, contributory infringement, and inducement to infringe.

Trisport sought summary judgment of non-infringement or, in the alternative, invalidity of the '606 patent. MacNeill, in turn, moved for partial summary judgment of patent validity of the '606 patent, partial summary judgment of infringement of Claims 1 through 3 and Claims 7 and 8 of the '606 patent, and for summary judgment for inducement and contributory infringement of the '606 patent. As resolution of these motions required construction of the patent claims, *see* MediaCom Corp. v. Rates Tech., Inc., 4 F.Supp.2d 17, 22-23 (D.Mass.1998) (explaining that a summary judgment motion is a perfectly appropriate vehicle in which to conduct a *Markman* hearing), this Court construed the relevant claim language after a *Markman* hearing on December 8, 1999. Subsequently, by Order of January 7, 2000, this Court granted summary judgment to Trisport only as to non-infringement of Claims 7 and 8, and denied all the other motions for partial summary judgment or summary judgment. Trial commenced on January 31, 2000, and resulted in a jury verdict for Trisport on all of MacNeill's claims. MacNeill has duly moved for a new trial. This memorandum sets out the Court's reasons for its legal rulings on the pre-trial motions and addresses the motion for new trial.

II. FACTUAL BACKGROUND

The basic background facts can be summarized from the First Amended Complaint. On August 6, 1991, U.S. Patent No. 5,036,606, entitled "Locking Cleat and Receptacle System," was issued in the name of Thomas W. Erich et al. First Am. Compl. para. 7. This patent relates to removable traction cleats and

receptacles, typically used in golf shoes. Id. MacNeill is now the owner of the '606 patent. Id. Trisport sells cleats and receptacles to various shoe manufacturers, id. para. 8, in particular using the brand name "FastTwist." MacNeill alleges that Trisport's cleats infringe several claims of the '606 patent, and that such infringement was done knowingly and intentionally. Id. para.para. 11-12. Furthermore, MacNeill alleges contributory infringement and inducement to infringe with respect to Trisport's commercial relationship with other shoe manufacturers. Id. para.para. 13-14.

Before delving into the legal issues involved in this matter, a general overview of golf shoe cleats is helpful. These remarks are introductory only, however, and no legal conclusions should be taken from them.

The '606 patent addresses a challenge that shoe cleat manufacturers have long tried to address: creating a cleat that is both removable and yet will not come off during normal use. For a long time, removable cleats have screwed into the sole of the shoe by means of a threaded post. A matching threaded receptacle existed in the sole of the shoe, and it was the mere tightness of the fit between them that kept the cleat in place during use.

The main advance of the '606 patent is the provision of a "locking" system whereby the cleat, once completely screwed into the sole of the shoe, "locks" into place in such a way that additional force is be required to remove it. While still removable,cleats designed under the teachings of the '606 patent stay in place far better than cleats that merely use a threaded post.

The '606 patent was not the first or only patent to incorporate a locking mechanism for shoe cleats, however. For example, U.S. Patent No. 5,123,184 describes a locking mechanism using a series of tongues that lock the cleat into place as they pass over projections in the receptacle when the cleat is being screwed into place. Those tongues, however, break off when the cleat is removed, thus ending the cleat's usefulness. The '606 design, in contrast, presents a completely reusable design. Surrounding the typical center threaded post is a round cuff on which are located equally-spaced axially-oriented "splines" (projections). The receptacle in the shoe is created to match the cuff and splines, with its own "ring" and splines. As the cleat is screwed into the receptacle in the sole of the shoe, the splines on the cuff of the cleat pass over the splines on the ring of the receptacle and lock into each other. The result is a cleat that is reusable, removable, and stays firmly in place during use.

Although several of Trisport's cleat models are implicated here, they all share a basic structure. The Trisport cleats contain posts that are formed so that they have rounded projections on the surface facing the threaded post. The receptacle has a ring with a matching set of splines facing outwards. When the cleat is screwed into the shoe sole, the projections on the posts pass over the splines until they mesh and lock into place.

The two parties differ as to whether Trisport's ring of posts is itself a cylindrical cuff as in the '606 patent. Surrounding the typical threaded post is, from Trisport's point of view, a circular ring of twelve independent posts. MacNeill, however, sees the twelve posts as a single cylindrical cuff. These differing conceptualizations are central to the resolution of this case, and whether this dispute is one of fact or law is a question that will recur throughout this opinion.

The preceding is but a cursory and introductory description of the technology involved in the patent. The precise legal scope of the patent is, of course, more complex. With this general overview of the technology in mind, this Court now turns to consideration of the legal issues.

III. DISCUSSION

A. *Markman* Hearing: Interpretation of the Patent Claims

[1] It has now become generally accepted that, barring a case so clear that quick resolution is manifestly in the litigant's interests to minimize transaction costs, the best time to hold the *Markman* hearing is at the summary judgment stage of the litigation-at or near the close of discovery while some time yet remains before trial for the parties to gear up (or settle) in light of the judge's claim construction. *See* William F. Lee & Anita K. Krug, Still Adjusting to Markman : A Prescription for the Timing of Claim Construction Hearings, 13 Harv. J.L. & Tech. 55, 82-86 (1999).

Accordingly, this Court held a hearing on December 8, 1999, to construe the claims of the patent that were necessary to resolve the summary judgment motions. At that hearing, the Court considered the text of the '606 patent claims and heard extensive argument from counsel. As the patented device is fairly easy to comprehend and visualize, there was no occasion to resort to the prosecution history or affidavits from experts. The Court at this stage made no comparison between the patented device and the allegedly infringing device. FN1

FN1. This Court notes that as the Federal Circuit has wrestled with the dictates of *Markman,* it has been ever more willing to expand the parameters of the *Markman* hearing so that the construing trial judge can place the claim language in "context." *See, e.g.,* Pitney Bowes, Inc. v. Hewlett-Packard Co., 182 F.3d 1298, 1314 (Fed.Cir.1999) (Michel, J.); EMI Group N. Am., Inc. v. Intel Corp., 157 F.3d 887, 892 (Fed.Cir.1998). With respect, the hierarchy established in Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582-83 (Fed.Cir.1996) remains the surest guide to decision as long as it is not followed slavishly and the flexibility provided by *Pitney Bowes* is used as necessary. *Vitronics* properly focuses the attention of the trial judge on the actual claim language (clarified, if necessary, by the prosecution history). *See* Vitronics, 90 F.3d at 1582 (citing Markman, 52 F.3d at 979). The analogy to statutory construction is compelling, *see* MediaCom Corp., 4 F.Supp.2d at 23 & n. 4, and properly confines the judiciary to its traditional law "defining" role: in essence, the judge's role in claim construction (defining the relevant language as matter of law) is equally a teaching role because such construction is meaningless unless it can be conveyed to a jury so as to aid the jury in its fact finding role. To open up *Markman* hearings to detailed comparisons between the patented and allegedly infringing device creates the unacceptable risk of conflating claim construction (law teaching) with infringement (fact finding).

Let's face it, when *Markman* hearings become miniature or full blown infringement trials, the actual *language* of the claim diminishes in importance relative to the *context* of the particular dispute, despite the Supreme Court's admonition that it was the judiciary's particular facility for construing *language* that warranted denoting claim construction as a legal, and hence judicial, function. Markman, 517 U.S. at 388-89, 116 S.Ct. 1384 ("Patent construction in particular 'is a special occupation, requiring, like all others, special training and practice. The judge from his training and discipline, is more likely to give a proper interpretation to such instruments than a jury.' " [quoting Parker v. Hulme, 18 F. Cas. 1138, 1140 (C.C.E.D.Pa.1849) (No. 10,740)]).
After the hearing, this Court construed the meaning of several terms, taken from the following claims of the '606 patent:

1. A traction cleat for removable attachment to the underside of footwear, the cleat comprising:

(a) an axial member, having a vertical axis and first and second ends, and including:

i. at the first end, engagement means for removable engagement with a mated receptacle,

ii. a cylindrical cuff disposed concentrically around the engagement means and having inner and outer surfaces, wherein an annular gap is defined between the engagement means and the cuff,

iii. an axially oriented spline disposed on one of the cuff's inner and outer surfaces in such fashion as to be able to mesh with a similar spline on the mated receptacle, and

iv. at the second end, a ground-engaging head portion; and

(b) a support structure extending radially outward from a region between the engagement means and the head portion along the vertical axis.

. . . . .

7. A receptacle for a traction cleat comprising:

(a) a base for affixing the receptacle to the sole of a shoe;

(b) receiving means affixed to the base for removably engaging a member of a mated traction cleat;

(c) a first cylindrical ring disposed concentrically around the receiving means and having inner and outer surfaces; and

(d) a second cylindrical ring disposed concentrically around the engagement means, so that one of the first and second rings is outside of the other, and the outside ring serves to delineate the boundary of the hole in the sole; and

(e) a plurality of axially oriented splines disposed on one of the first ring's inner and outer surfaces in such fashion as to be able to mesh with similar splines on the mated traction cleat.

'606 patent, col.4, 11.25-44; col.4, 1.64 to col.5, 1.12.

From these claims, the Court construed the following contested claim terms:

From Claim 1, the term "cylindrical cuff";

From Claims 1 and 7, the term "axially oriented spline";

From Claim 7, the term "sole" as compared to the term "receptacle"; and

From Claim 7, the term "outside ring."

This Court's construction of these claim terms was announced orally in the form of a proposed address to the jury. This makes eminent sense in a jury case because the claim construction obligation in such a case involves not only properly construing the claim language so that the litigants (for the most part skilled in the

particular art) will understand it, but also teaching the chosen construction to the jury in language that will inform the jury in plain English the legal framework it must apply in order to do justice. *See generally Jury Trial Innovations* 163-67 (G. Thomas Munstarman, Paula L. Hannaford & G. Marc Whitehead eds., 1997) (providing references to journal articles and studies regarding the benefits of plain English jury instructions, including Michael J. Saks, Judicial Nullification, 68 Ind. L.J. 1281 [1993], William W. Schwarzer, *Communicating with Juries: Problems and Remedies,* 69 Cal. L.Rev. 731, 743-55 [1981], and Laurence J. Severance & Elizabeth F. Loftus, *Improving the Ability of Jurors to Comprehend and Apply Criminal Jury Instructions,* 17 Law & Soc'y Rev. 153 [1982]). The very real risk inherent in such teaching is that misconceptualizations and imprecision of language will creep in and relevant claim limitations will be obscured or deleted. To minimize this risk, it is appropriate to recite the construction as near as possible to the language intended for the jury and give the parties a chance to comment. This was done here. Inevitably, however, even the best of teachers cannot instruct the jury on every possible application of the general conceptualization to the specific facts. Such an omission happened here. The Court construed the claim as follows:

In the patent you will see reference at the appropriate place to something called "a cylindrical cuff disposed concentrically around the engagement means and having inner and outer surfaces wherein an annular gap is defined between the engagement means and the cuff."

What do they mean there when they say "cylindrical cuff"? What's meant by this specific aspect of the patent? What it means is an independent band arranged in a concentric circle around the engagement part which band has an inner and outer surface where there is a circular gap between the engagement part and that band.

Right below that you'll see the following definition in the patent, the following claim:

"An axially oriented spline disposed on one of the cuff's inner and outer surfaces in such fashion as to be able to mesh with a similar spline on the mated receptacle."

Now, what do they mean when they say that? First, let me explain to you historically what a spline is; and it's actually a good old New England word.

In the old days when we had water wheels turning our-grinding our grain throughout New England and doing various mechanical things, the water wheel would turn an axle. And along the length-that simply means axially oriented-along the length of that axle, if it were a wooden axle, the mill owner would nail lengths of wood and it would put spaces between those lengths of wood which would turn the axle into in effect a giant gear. Those lengths of wood laid longways or axially along the axis, they're splines.

So, in the circumstances of this case, what they mean here is that on this band that I have just explained to you there is a projection either on the inner surface of the band or on the outer surface of the band, which projection is axially oriented-that means along the length of the band or cuff-set out in such a way as to be able to mesh with a similar projection on this mated receptacle part.

That's the second explanation.

And going over to the one in Claim 7, and I'll read the entire Claim 7. And I want specifically, ladies and gentlemen, to focus you on the requirements that are in C and D here.

The mention is made of a first cylindrical ring disposed concentrically around the receiving means and having inner and outer surfaces. Then in D, a second cylindrical ring disposed concentrically around the engagement means so that one of the first and second rings is outside the other and the outside ring serves to delineate the boundary of the hole in the shoe.

Now, for purposes of this case, what I need to define is that outside ring. In order for the patented item that we are talking about here, this patented item requires that there be made a hole in the sole of the shoe. And it requires that there be two rings. The outside ring is the boundary between the receptacle part and the sole of the shoe. The outside ring may be made of sole material. The outside ring may be engineered so it presses, so it squeezes directly up against the sole of the shoe. That's what is meant by the phrase "the outside ring serves to delineate the boundary of the hole in the sole."

Markman Hr'g Tr. at 72-74 (Dec. 8, 1999).

B. Motions Relating to Claims 1 through 3 of the '606 Patent

As noted by the Court at the *Markman* hearing, the proposed claim construction was sufficient to inform this Court as to the pending motions for summary judgment, although the construction remained open to clarification or modification for the jury at trial. *Id*. at 76.

Trisport had moved for partial summary judgment of non-infringement of Claims 1 through 3 of the '606 patent. MacNeill, in turn, had moved for summary judgment of infringement on those same Claims.

Claim 1 is set out above. Claims 2 and 3 are dependent claims:

2. A traction cleat according to claim 1, further comprising a plurality of axially oriented splines disposed on one of the cuff's inner and outer surfaces.

3. A traction cleat according to claim 2, wherein the splines are disposed on the cuff's inner surfaces."

'606 patent, col.4, 11.44-48.

[2] [3] [4] Trisport sought summary judgment of non-infringement under both theories of patent infringement: literal infringement and infringement under the doctrine of equivalents. "To prove literal infringement, the patentee must show that the accused device contains every limitation in the asserted claims. If even one limitation is missing or not met as claimed, there is no literal infringement." Elkay Mfg. Co. v. Ebco Mfg. Co., 192 F.3d 973, 980 (Fed.Cir.1999) (quoting Mas-Hamilton Group v. LaGard, Inc., 156 F.3d 1206, 1211 [Fed. Cir.1998]), *cert. denied,* 529 U.S. 1066, 120 S.Ct. 1672, 146 L.Ed.2d 482 (2000). In the absence of literal infringement, infringement may be found under the doctrine of equivalents in those instances in which each element of the accused device is substantially equivalent to each corresponding element of the asserted claim. Warner-Jenkinson Co. v. Hilton Davis Chem. Co., 520 U.S. 17, 21, 29-30, 117 S.Ct. 1040, 137 L.Ed.2d 146 (1997). "The doctrine of equivalents requires that the accused device have an identical or equivalent element for each limitation contained in the claim-sometimes known as the 'all elements rule.' " Loral Fairchild Corp. v. Sony Corp., 181 F.3d 1313, 1327 (Fed.Cir.1999) (citing Warner-Jenkinson Co., 520 U.S. at 18, 29, 117 S.Ct. 1040).

[5] [6] [7] "Whether a claim encompasses an accused device, either literally or under the doctrine of equivalents, is a question of fact." Zelinski v. Brunswick Corp., 185 F.3d 1311, 1315 (Fed.Cir.1999). Summary judgment, thus, may be granted as to literalinfringement if no reasonable fact finder could conclude that the accused device meets each and every limitation of the properly construed claims. IMS Tech., Inc. v. Haas Automation, Inc., 206 F.3d 1422 (Fed.Cir.) (citing Voice Techs. Group, Inc. v. VMC Sys., Inc., 164 F.3d 605, 612 [Fed. Cir.1999]), *cert. dismissed,* 530 U.S. 1299, 121 S.Ct. 24, 147 L.Ed.2d 1047 (2000). Likewise, with respect to the doctrine of equivalents, a court should grant summary judgment in any case in which no reasonable fact finder would find equivalence. Overhead Door Corp. v. Chamberlain Group, Inc., 194 F.3d 1261, 1269 (Fed.Cir.1999) (citing Sage Prods., Inc. v. Devon Indus., Inc., 126 F.3d 1420, 1423 [Fed. Cir.1997]); *see, e.g.,* Harpak, Inc. v. Convenience Food Sys., Inc., 112 F.Supp.2d 82, 86-87 (D.Mass.2000).

With its claim construction in mind, the Court applied this legal framework to its comparison of the patented claims to the allegedly infringing devices. Trisport argued that its FastTwist cleat does not infringe Claims 1 through 3 of the '606 patent because it lacks the "cylindrical cuff" identified in the claims. Trisport based its argument on its desired construction of that term to include the words "solid," "continuous," and "independent." Def.'s Mem. Supp. Summ. J. at 5. This Court, however, had construed the term "cylindrical cuff" to mean "an independent band arranged in a concentric circle around the engagement part which band has an inner and outer surface where there is a circular gap between the engagement part and that band." *Markman* Hr'g Tr. at 72-73. Words like "solid" were intentionally omitted from this Court's construction of the claim term, recognizing the possibility that because one could conceive of a ring of posts as a continuous band despite its gaps, FastTwist could still literally infringe Claims 1 through 3.FN2

FN2. This Court was, and remained, influenced by an observation made at the *Markman* hearing that the word "cuff" suggests a similarity to the cuff of a shirt or a coat. *Markman* Hr'g Tr. at 26-27. The cuffs typically found on such articles of clothing are found either to be continuous or to have a single "gap" at the place where a button is fastened to close the cuff. As will be seen, this observation was incorporated into the claim construction ultimately presented to the jury at trial.

Thus, under this Court's construction of the term "cylindrical cuff," it remained an open question of fact whether FastTwist's circular locking mechanism, surrounding the threaded engagement part, falls under Claims 1 through 3 of the '606 patent. On one hand, the locking mechanism does appear to be independent of the cleat base and is arranged in the shape of a circular band surrounding the engagement means allowing for the conceptualization of the ring of posts as an "independent band." On the other hand, the FastTwist cleat consists of twelve independent posts, with twelve relatively small breaks between them. Where exactly the proper conceptualization of FastTwist lies on this dichotomous spectrum between a "band" and a "ring of posts" is fundamentally for the jury to decide as a question of fact. This is not a situation in which a reasonable jury could only conclude that there was no infringement. Summary judgment as to Claims 1 through 3 of the '606 patent, therefore, was inappropriate at that time. FN3

FN3. It is true that the Federal Circuit has said repeatedly:
Where, as here, the parties do not dispute any relevant facts regarding the accused product but disagree over [claim interpretation], the question of literal infringement collapses to one of claim construction and is thus amenable to summary judgment.

K-2 Corp. v. Salomon S.A., 191 F.3d 1356, 1362 (Fed.Cir.1999) (alteration in original) (internal quotation marks omitted) (quoting Athletic Alternatives, Inc. v. Prince Mfg., Inc., 73 F.3d 1573, 1578 [Fed.Cir.1996]); *accord* Bloomstein v. Paramount Pictures Corp., 215 F.3d 1351, Nos. 99-1051, 99-1203, 1999 WL 693869, at (Fed.Cir. Sept.3, 1999) (Table) (per curiam) (citations omitted) (unpublished-for the propriety of citing an unpublished opinion, see Anastasoff v. United States, 223 F.3d 898, 899-905 [8th Cir.] [R. Arnold, J.] [holding that unpublished opinions have precedential effect], *vacated as moot,* 235 F.3d 1054 [8th Cir.2000], Giese v. Pierce Chem. Co., 43 F.Supp.2d 98, 103 [D. Mass.1999] [relying on unpublished opinions' persuasive authority], and Richard S. Arnold, Unpublished Opinions: A Comment, 1 J.App. Prac. & Process 219 [1999]); Rhine v. Casio, Inc., 183 F.3d 1342, 1345 (Fed.Cir.1999) (quoting General Mills, Inc., v. Hunt-Wesson, Inc., 103 F.3d 978, 983 [Fed.Cir.1997]); Johnson Worldwide Assocs., Inc. v. Zebco Corp., 175 F.3d 985, 988-89 (Fed.Cir.1999) (quoting Athletic Alternatives, Inc., 73 F.3d at 1578); Desper Prods., Inc. v. QSound Labs, Inc., 157 F.3d 1325, 1332-33 (Fed.Cir.1998) (citing Athletic Alternatives, Inc., 73 F.3d at 1578).

One could easily conclude that the Court should have weighed this language more carefully and granted Trisport summary judgment as to literal infringement. The Court did not, however, because it considered the determining conceptualization-whether FastTwist has a "band" or a "ring of posts"-to be a matter of fact. It still does. Thus, the Court considers correct the ruling denying summary judgment.
Trisport also argued that the FastTwist cleat could not infringe Claims 1 through 3 because it does not possess "axially oriented splines." Def.'s Mem. Supp. Summ. J. at 6. This Court's claim construction indicates that the term "spline" is broad, reflecting a storied historical origin. *Markman* Hr'g Tr. at 73-74. Trisport's cleat consists of a series of posts. On each post is a rounded protrusion which faces inwards, designed to engage and lock into splines on the mated receptacle. These protrusions could be viewed simply as a functional shape of the posts themselves (because they extend the width of each post) or alternatively as splines which have been integrated into the posts. Additionally, if the ring of posts is viewed as a cuff which has been cut in twelve places, then the cutting may be viewed as having been made at the places between each spline, leaving twelve posts with the splines attached, appearing as integrated units. Under any of these scenarios, this Court could not rule as matter of law that Trisport's cleat failed to exhibit any and all structures that a reasonable jury might determine to be splines under the construction adopted at the *Markman* hearing. Therefore, summary judgment was not appropriate at that stage.

Trisport's motion for summary judgment as to the doctrine of equivalents was denied for similar reasons. A reasonable jury, perhaps even deciding that Trisport's cleats did not literally infringe Claims 1 through 3 of the '606 patent, could find that the structures found on the cleats are substantially equivalent to each corresponding element of the asserted claims.

C. Motions Relating to Claims 7 and 8 of the '606 Patent

[8] Trisport also moved for summary judgment of non-infringement of Claims 7 and 8 of the '606 patent, arguing that its cleat receptacles do not contain the "second ring" or "outside ring" required by the claim language. Def.'s Mem. Supp. Summ. J. at 13.

The language in Claims 7 and 8 makes clear that two "rings" are contemplated by the claim language. The receptacle comprises, among other things:

(c) a first cylindrical ring disposed concentrically around the receiving means and having inner and outer

surfaces; and

(d) a second cylindrical ring disposed concentrically around the engagement means, so that one of the first and second rings is outside of the other, and the outside ring serves to delineate the boundary of the hole in the sole.

'606 patent, col.5, 11.1-8.

At the *Markman* hearing, this Court construed the language "outside ring" as follows:

[T]his patented item requires that there be made a hole in the sole of the shoe. And it requires that there be two rings. The outside ring is the boundary between the receptacle part and the sole of the shoe. The outside ring may be made of sole material. The outside ring may be engineered so it presses, so it squeezes directly up against the sole of the shoe. That's what is meant by the phrase "the outside ring serves to delineate the boundary of the hole in the sole."

Markman Hr'g Tr. at 74.

Trisport's FastTwist cleat receptacles possess one ring, upon which axial splines are attached in order to engage the posts of the cleat. This ring surrounds the threaded screw post at the center of the cleat. The receptacle is made from a single piece of plastic and is inset by the shoe manufacturer into the sole of a shoe, said sole having a circular hole or gap in it to accommodate the area in which the cleat engages the receptacle. Notably absent from Trisport's receptacle design is any ringed structure other than the one ring upon which the splines are affixed.

MacNeill argued in its motion briefs and at the *Markman* hearing that the outer boundary rim of the hole in the sole of the shoe acted as the "second ring" and "outer ring" described by the claims. *See, e.g., id.* at 56-59. The rim of the sole used in connection with FastTwist cleats was a single piece of rubber or polymer. The same material is used at the rim of the receptacle hole as is used for the entire sole. Thus, there is no separate structure that qualifies as a "ring." In the patent's Description of Specific Embodiments, figures 5A, 5B, and 5C are mentioned as depictions of one of the preferred embodiments. '606 patent, col.3, 1.5 to col.4, 1.2. The text explains that the outer ring "helps delineate the minimum hole diameter in the sole ... to permit the receptacle to be accessible through the hole." Id. col.3, 11.57-59. Additionally, the clearance space between the sole and the outside of the ring can be "infinitesimally small." Id. col.3, 1.61.

Acknowledging an embodiment that allows two structures to become infinitesimally close does not compel this Court to read one of those structures out of existence. The claims describe two different rings contained in the receptacle, and the preferred embodiment states that the function of the outer ring is to define the outer limit of the hole diameter. This Court is slow to read too much significance into the language of the specification, especially when it appears to contradict the plain meaning and logic of the claim language. It is true that the specification can be used to understand and interpret language of a claim. Bell Communications Research, Inc. v. Vitalink Communications Corp., 55 F.3d 615, 620 (Fed.Cir.1995) ("[C]laims are to be construed in the light of the specifications and both are to be read with a view to ascertaining the invention." [quoting United States v. Adams, 383 U.S. 39, 49, 86 S.Ct. 708, 15 L.Ed.2d 572 (1966) (internal quotation marks omitted)]); Markman, 52 F.3d at 979 ("Claims must be read in view of the specification, of which they are a part." [citations omitted]). In this case, however, the language in the specification only tells this Court where the two rings may be located; it cannot act to capture within Claims

7 and 8 that which Claims 7 and 8 do not describe: an "outer ring" that is actually one and the same as the shoe's sole. No reasonable jury could find that Trisport's cleat receptacles literally contain the "outer ring" or "second ring" required by Claims 7 and 8. Summary judgment was therefore granted to Trisport on these claims.

[9] Summary judgment was also granted with respect to MacNeill's doctrine of equivalents theory. Under that theory, if a structure described by the claim is found literally to be lacking from the accused device, there may still be infringement if the accused device's structures "perform ... substantially the same function in substantially the same way to achieve substantially the same result." Kraft Foods, Inc. v. Int'l Trading Co., 203 F.3d 1362, 1371 (Fed.Cir.2000) (quoting Ethicon Endo-Surgery, Inc. v. United States Surgical Corp., 149 F.3d 1309, 1321 [Fed. Cir.1998]). There is no structure in Trisport's cleat receptacle that performs any of the possible functions of the outer ring in a substantially similar way. The outer ring might be used to provide additional structural support of weight from the insole to the cleat. The sole rim, acting alone, cannot do this. The outer ring might be used to further seal water and dirt from the thread mechanism. The outer sole, on its own, cannot add this functionality. Finally, the outer ring may act as an expansion seal, allowing the structure of the sole surrounding the receptacle to expand, contract, or flex with changes in temperature, body weight, and the angle of the force exerted on the cleat mechanism. The area surrounding the receptacle hole on the FastTwist sole cannot be said to do any of these functions because all that is present is the sole itself. Since the sole rim is also present when there are actually two separate rings in the receptacle, such a conclusion would mean that the outer ring serves no purpose, for such an "outer ring" is always present at the rim of the sole.

No reasonable jury could find that the sole material surrounding the receptacle hole acts in a substantially similar manner as the outer ring in the '606 patent because the '606 patent envisions an "outer ring" that coexists independently from the surrounding sole. The outer ring has a function independent of the sole material. To allow the sole material to substitute for the outer ring contradicts the notion that patent claims capture something of use to the invention. By placing in its claim the language that describes a second or outer ring, MacNeill captured a potentially valuable monopoly on cleat receptacles employing the use of such an outside ring structure. It cannot also seek to capture receptacles that do not make use of such structures or their equivalents. Trisport's motion for summary judgment for non-infringement as to Claims 7 and 8 of the '606 patent was therefore granted.

D. Motion for a New Trial

MacNeill has brought a Motion for a New Trial, arguing that this Court's clarification of its claims construction regarding "cuff," in response to a question from the jury, constituted a prejudicial error of law.

1. Background

This Court, pursuant to the reasoning above, disposed of the motions for summary judgment after its oral claim construction at the *Markman* hearing. At the time of that hearing, this Court indicated that the construction might be subject to modifications and improvements before presentation to the jury. *Markman* Hr'g Tr. at 76-78. The claim construction, as this Court delivered it to the jury, was indeed a modification of the language used at the *Markman* hearing. The rationale and reasons for this Court's decisions relating to summary judgment, however, remained intact.

The construction given to the jury at the start of the trial was as follows:

What do they mean when they say cylindrical cuff? What is meant by this specific aspect of the patent, cylindrical cuff? What it means is an independent band arranged in a concentric circle around the engagement part which band has an inner and an outer surface where there is a circular gap between the engagement part and that band. A cuff may be either a continuous band, like the cuff on my robe, you see it has the flowing sleeves but there's a cuff, or it may have a break like the cuff on my shirt, the band, the independent band which is the cuff on my shirt, but the band you see has a break. So it's that independent band arranged concentrically either with or without a break. That's what's meant by cylindrical cuff.

Now, right below that point in the patent you're going to find the following claim: An axially oriented spline disposed on one of the cuff's inner and outer surfaces in such fashion as to be able to mesh with a similar spline on the mated receptacle.

Now, what do they mean when they say that? Let me explain historically what is meant by the use of the word spline, S P L I N E. Actually it's a good old New England word. And we go back to the days of the water-wheels and mills in New England. You've got, the current would run by and it would turn a waterwheel. Well, a waterwheel would have an axle. And the axle would run back into the mill. Now, the spline, if it were a wooden axle, the mill owner would take lengths of wood and he would, and he would nail a length of wood to the thick axle which was attached to the waterwheel. And he would nail it along the length. Then he would leave a space and then he would nail another spline. And do you see what they are? They're like giant teeth. So when you have some other gear, as the water turns the axle, now with the splines nailed into the axle, that, as that axle turns it can mechanically turn other machinery in the mill.

This case has nothing to do with mills or water-wheels, but the word spline, that's a good definition of the word spline. What it is is-and when we say axially oriented, we mean along the length of it. If it goes along the length of the thing and spaced apart like teeth to mesh with other gears or other splines.

In the circumstances of this case, what they mean here is that on this band, this concentric band that I have just explained to you, there is a projection on either the inner surface of the band or the outer surface of the band, or cuff, which projection is axially oriented, that means along the length of the cuff, in such a way as to be able to mesh with a similar projection on the mated receptacle part.

I should say to you that a spline in the description I gave you, you're nailing wood along the axle, but it could extend beyond the end of an axle, in other words, it could stick out beyond the end of an axle.

Trial Tr. at 84-86.

The refined construction presented to the jury introduced the idea that a "cuff" may have "a break," such as the one found on the cuff of a buttoned shirt. The Court made this refinement to the claims construction in light of MacNeill's contention that Trisport's engagement means could still be considered a "cylindrical cuff" if it were viewed as a cuff that had been cut. The Court, therefore, elaborated upon whether the claim term "cuff" could include a non-continuous structure, that is, a structure that had a cut or a break. As matter of law, this Court concluded that a cuff with a break could still be considered a cuff, based on an analogy to the common use of the word "cuff" in the context of clothing (e.g., on shirt sleeves or collars) to encompass rings with breaks to allow fastening with buttons or cufflinks. FN4

FN4. In retrospect, the Court concedes that expansion of the definition of "cuff" from the *Markman* hearing to include bands with single breaks was a superfluous inclusion because it seems that if any reasonable jury

were to conclude that FastTwist had at least one break, as in a shirt cuff, it must also conclude that it had twelve breaks and hence was not a cuff at all. Whether such inclusion constituted legal error is a distinct question. This Court stands firm in its belief that the court's role in claim construction should not intrude on the factfinding role of the jury with respect to infringement. With this in mind, inclusion of the analogy to a shirt cuff was within the province of the Court because that question clearly was one of claim construction. Thus, this Court committed legal error by including the analogy only if the analogy is wrong as matter of law. Clearly, this Court disagrees with that conclusion. Nonetheless, it is more than willing to concede that, with the benefit of hindsight, inclusion of the analogy may have been a less than ideal exertion of its law teaching role as was made apparent by the jury's own question. Although the Court concludes that this does not rise to the level of prejudicial error, it nonetheless takes to heart the importance of a court's law teaching role and the large ramifications that such a role has on the outcome of trials.

After the trial and during the jury's deliberations, the jury presented a question to this Court relating to the constructionof the claim term "cuff." The question revealed that the jury had resolved the factual conceptualization of FastTwist as being a single band composed of twelve posts against MacNeill and considered the Trisport device to be twelve distinct posts in a ring.FN5 The jury thus wanted further legal explication of this Court's construction of "cuff" as a "band" with, perhaps, "a break." The question and this Court's answer were as follows:

FN5. MacNeill had presented to the jury the alternate conceptualization of FastTwist as being a single continuous ring with slits:
[FastTwist] is not freestanding at all .... This is a single unitary structure. It's all molded as a single piece and it's all connected at the base. Nothing is freestanding here. It's a single structure. Does it have slits? Sure it has slits. The slits go from the top to the bottom. But they don't go through the bottom. That would be freestanding. How you do that, I don't know. Mr. Kelly doesn't know either. But that is not freestanding.

[Trisport] told the United States that they had invented something that was freestanding. And somebody may some day. But this is not it. And why? Because as Mr. Kelly admitted to you, it's a single structure. It's a single unitary structure. And as he admitted to you also, it's all connected at the base. How could that be freestanding? This is a cuff. This is a collar. This is a cylindrical ring. This is the same as, and it is also the functional equivalent of, Claim 1 in the '606 patent.

Trial Tr. at 1272 (closing arguments); *see* id. at 258 ("[FastTwist is] a band ...-it's a band that encircles the engagement means. And it has a slit and if it were as you asked me, a cuff that has multiple free-standing posts, it would still be a band that encircled the engagement means.").

The Court notes here that MacNeill is incorrect that the clarification that "a break" means "one and only one" break should have led this Court to grant summary judgment against MacNeill on the issue of literal infringement. Although it was undisputed that Trisport's cylindrical cuff contained more than one "break," in the sense of a cuff on a shirt, whether the gaps between the posts of FastTwist should be conceived of as "breaks" at all was for the jury to determine. The fact that the jury conceived of the structure as being twelve freestanding posts rather than one continuous ring composed of posts is obvious from the verdict.

It should be noted, however, that it is of no assistance to MacNeill to point out that this Court should have ruled against it at an earlier stage. Although this Court strives for efficiency, it doubts that this particular trial would have been any shorter or more efficient in the absence of the literal infringement claim, considering that the parties' witnesses addressed the doctrine of equivalents issue simultaneously, which was by far the more involved theory. Leaving the literal infringement claim for the jury to decide may have inadvertently skirted the efficient model of pretrial motion practice posited by Federal Rule of Civil Procedure 56, but MacNeill cannot complain now that it got its day in front of a jury on a claim that it appears ought have been resolved as matter of law in the first place.
THE COURT: ... Question 2: In your Honor's definition of cylindrical cuff is, quote, a break, close quote, limited to one and only one break? Is that Question 2, Mr. Foreman?
THE FOREMAN: Yes.

THE COURT: Is that Question 2, ladies and gentlemen of the jury?

THE JURY: Yes.

THE COURT: To that question I make this answer. Yes.

Trial Tr. at 1358-59. Shortly thereafter, the jury returned a verdict for Trisport on all issues.
MacNeill characterizes this answer as a "reversal" of this Court's original claims construction and an "extraordinary error" of law. Pl.'s Mem. Supp. New Trial at 5. Accordingly, MacNeill has brought a Motion for a New Trial.

2. Standards for a New Trial

[10] A motion for a new trial is not to be taken lightly. Such an expensive, burdensome option should be exercised only when "an error occurred in the conduct of the trial that was so grievous as to have rendered the trial unfair." Tec Air, Inc. v. Denso Mfg. Mich. Inc., 192 F.3d 1353, 1361 (Fed.Cir.1999) (quoting DMI, Inc. v. Deere & Co., 802 F.2d 421, 427 [Fed. Cir.1986]). This Court has previously acknowledged the high standard required to warrant a new trial. Tavares v. Mich. Fishing, Inc., 937 F.Supp. 84, 86 (D.Mass.1996) (citations omitted), *aff'd,* 129 F.3d 1252 (1st Cir.1997); *see also* Fed.R.Civ.P. 61 ("[N]o error or defect in any ruling or order in anything done or omitted by the court ... is ground for granting a new trial or for setting aside a verdict ... unless refusal to take such action appears to the court inconsistent with substantial justice.").FN6 Thus, MacNeill must show that this Court committed error and that the error rendered the trial unfair.

FN6. Rule 61 is concerned with the concept of "harmless error." MacNeill, however, must first show that an error of law actually occurred before this Court need consider whether an alleged error is harmless.

[11] MacNeill has failed to show, however, that a legal error occurred. This Court concludes that it was appropriate and necessary to clarify for the jury, upon its specific and direct question, an ambiguity in the claims construction that hindered the jury's deliberations. Such a clarification, analogous to a clarification of a statutory point of law, is entirely consistent with both the vision of *Markman* and this Court's opinion in *MediaCom,* and does not offend any constitutional protections of the right to a jury trial.

3. The Framework of *Markman* and *MediaCom*

MacNeill argues that this Court's affirmative answer to jury question 2 was a prejudicial violation of *Markman* and this Court's own decision in *MediaCom*. Pl.'s Mem. Supp. New Trial at 5-9.

In *Markman,* the Supreme Court determined that the interpretation of patent claim language is an issue of law for the judge, not the jury. Markman, 517 U.S. at 391, 116 S.Ct. 1384. *Markman* did not, however, set out when such interpretation was to take place or by what means. The district courts have implemented a variety of options in determining when and how to hold the *Markman* hearing. *See* Lee & Krug, *supra,* at 70-86. After reviewing the range of possible formats for a *Markman* hearing, this Court concluded in *MediaCom* that a resolution of claim construction is best done once an actual case or controversy has presented itself, typically through motion practice. *See* MediaCom, 4 F.Supp.2d at 22-23.

This Court acknowledged in *MediaCom* that infringement analysis requires two separate steps: "First, the court must construe the claims in order to establish their meaning and scope. Only then may the trier of fact compare the claims to the accused device in order to determine infringement." *Id*. at 25. This procedure was followed in the instant case: the *Markman* hearing was held in advance of the trial and upon submission of motions for summary judgment. The Court rendered a construction orally at that hearing, which was modified for presentation to the jury before the trial began.

At the time of the delivery of the claim construction to the jury, this Court believed the phrase "a break" to be a sufficient definition for the jury to act as factfinder. Before the jury was charged, MacNeill was concerned that a potential ambiguity relating to the number of possible "breaks" existed. *See* Trial Tr. at 93. This Court specifically noted to the parties that the jury could very well understand "a break" to mean one and only one break, and when they so interpreted the Court's instructions, that would be consistent with the Court's conclusions of law regarding the claim language. FN7 *See id*. The jury was not certain that the phrase "a break" definitively meant one and only one break, and therefore asked this Court to clarify its ruling of law.

FN7. MacNeill's counsel argued that "by simply saying that a cuff can have a break, indeed the jury now has a literal instruction and when they see a cuff that has more than one break they may say the case is over." The Court replied, "They may. And it may be. That's my construction. I stand on it." Trial Tr. at 93.

Nothing in *Markman* or *MediaCom* speaks to the situation in which a jury asks a question concerning claim construction after the close of the trial. For obvious reasons, it is *impossible* to answer a jury's question about claim construction in advance of the trial. Although in this case there were strong suggestions by both parties that the ambiguity might arise, *see* Trial Tr. at 93, 402-05, 697-701, it is not the role of a court to clarify every possible ambiguity of law relevant to a case prior to sending the case to the jury, provided that the instructions to the jury make sense and are understandable. "A break," being singular, was in plain language equivalent to "one break." The jury sought confirmation of that linguistic inference, and this Court confirmed it. MacNeill would have liked to have had that ambiguity resolved at an earlier stage. More accurately, MacNeill wanted the construction to read that there could be multiple breaks in the cuff; that "a break" did not equate to "one and only one break." To that extent, MacNeill sought a clarification that was contrary to the plain meaning of this Court's construction, and this Court therefore denied it.FN8 Moreover, to the extent that MacNeill conceived of any ambiguity arising from use of "a break" to be a question of

fact, MacNeill is in error because it is the court's role to perform claim construction, which is clearly a question of law. *See* Trial Tr. at 404. It runs counter to neither *Markman* nor *MediaCom* for this Court to have sharpened the construction language in order to resolve a legal issue the jury wanted to be sure about. That MacNeill accurately predicted in advance that the jury might ask such a question neither makes the answer a question of fact for the jury to determine nor requires the Court to withhold the answer to the question when it is ultimately asked. Quite the opposite.

FN8. Therefore, it is MacNeill's proposed "clarification" that would have been a "reversal" of the original claims construction. It also would have been inconsistent with the Court's analogy to shirt cuffs, which are rarely, if ever, found to have more than one break.

In effect, *Markman* and *MediaCom* suggest that a court present to the jury the "statute" relevant to the case before the evidence is heard, so that the jury has a framework for understanding the terminology and technology relevant to the patent.FN9 The cases, however, mandate neither that every word of the construction be explained in detail before evidence is heard, nor that questions from the jury seeking clarification of claim terms be denied and the jury left to puzzle over what is the law of the case. Rather, jury questions, should they come along during deliberation, must be answered as completely as they would were a court answering a question of law derived from statutory language.

FN9. The court of appeals in *Markman* itself found statutory interpretation to be the most appropriate analogy to claims construction. Markman, 52 F.3d at 987.

The parties always run the risk that the clarification of law in response to a jury question will be inconsistent with a portion of the trial presentation. In this particular case, the Court knew that the phrase "a break" was a source of contention between the parties, but it believed that the singular grammar and the analogy to a shirt cuff would be sufficiently clear to the jury and the parties that no further construction was needed.FN10 The jury, however, required a further explanation, and it was given. Neither *Markman* nor *MediaCom* would deny the jury the specific clarification it asks on the basis that the claim construction should be so thorough and complete before the trial begins that no questions would ever arise. *Cf.* United States v. Ladd, 885 F.2d 954, 961 (1st Cir.1989) ("The judge is not required to guess as to other possible areas of jury confusion; robes and gavels are the tools of a jurist's trade-not tea leaves or crystal balls."). Such a rule would require a mistrial to be declared in any patent case in which a jury asks a legal question concerning the language of the claims. Although claim constructions are best made at the beginning of trial, this Court does not accept the position that it is locked into the exact language originally used and that no further clarification may be given. The clarification should be consistent with the construction already given, just as the explanation of statutory language should be consistent with any pre-charge given. The explanation here, equating the singular "a break" with the jury's contemplation of "one and only one break," is a consistent clarification.

FN10. The parties, acting in role with the adversarial system, argued for further claim construction that would galvanize their clients' position. This Court believed additional construction to be unnecessary.

4. Prejudice

MacNeill argues that the Court's clarification to the jury constituted prejudice. Although this Court has already decided that its response to the jury question was a proper clarification and not an erroneous "reversal," this Court weighs carefully the argument that MacNeill may have been unfairly surprised, and thus prejudiced, by the Court's decision to answer the jury question in light of its earlier denials of the parties' requests to clarify the construction. Moreover, in so doing, the Court will assume that its clarification was in fact a reversal as MacNeill argues.

MacNeill claims that the limitation of "cuff" to a structure having "one and only one" break "undercut the entire basis on which MacNeill presented evidence to the jury and has left MacNeill without meaningful opportunity to present an alternative case to the jury." Pl.'s Mem. Supp. New Trial at 8-9. MacNeill's concerns are unfounded. The entirety of the case presented to the jury allowed for, and at times stressed, the alternative "doctrine of equivalents" theory that the Trisport cleat lacked a literal "cylindrical cuff" but nonetheless performed substantially the same function in substantially the same way with the twelve posts. Furthermore, the claim construction "a break" was almost certainly to be interpreted by the jury to mean "one," and MacNeill acknowledged that eventuality. *See* Trial Tr. at 93. The jury did seek and receive confirmation of that interpretation, and MacNeill cannot claim to have been blind-sided by semantics whose plain meaning was evident. Any evidence at trial based on the possibility that a "cuff" could have more than one break was applicable to MacNeill's doctrine of equivalents theory. MacNeill was at all times prepared for the scenario in which the jury would take the phrase "a break" to mean "one break." Indeed, MacNeill argued for a conception of FastTwist as being a continuous band or cuff in essence having no breaks. *See, e.g.,* Trial Tr. at 1268 ("[Mr. MacNeill and Professor Bill Durgin] say it's a cylindrical ring. They also say it's a collar. They also say there's something called breaks here or slits that transform it from being a cuff. But Professor Durgin said: Is there a cylindrical cuff? Of course there's a cylindrical cuff. Look at it. All they've done is put slits in it. That's what you heard."); *id.* at 258. Therefore, there was no prejudice to MacNeill in this Court's decision to clarify the matter only once the jury had asked the question.FN11 This Court's response to the jury question, even if viewed from MacNeill's perspective as a "reversal" of direction, cannot be said to have been prejudicial to MacNeill's case.

FN11. The authorities MacNeill cites are inapposite. In Nations v. Sun Oil Co., 695 F.2d 933 (5th Cir.1983), the court of appeals found prejudice when the trial court had answered a question inconsistently, id. at 939. There, the response was contradictory to the jury instructions, the other answers given in response to jury questions, and applicable law. *Id.* That completely contradictory instruction is far removed from the nature of the clarification given to the jury by this Court. In Latsis v. Chandris, Inc., 20 F.3d 45 (2d Cir.1994), *aff'd,* 515 U.S. 347, 115 S.Ct. 2172, 132 L.Ed.2d 314 (1995), the court of appeals vacated a jury verdict because the trial court gave a "plainly erroneous" instruction concerning a statutory definition by using an inapplicable legal framework, id. at 52-53. In the instant case, there can be no such plain error because there is no existing legal framework for determining the definition of "cylindrical cuff" in the context of golf shoe cleats.

5. Fifth Amendment Right to Due Process of Law

MacNeill raises the prospect that this Court's response to jury question 2 was a violation of MacNeill's Fifth Amendment right to due process of law. MacNeill's argument is based on the principle that a court must follow procedures ratified under common law, here, the dictates of *Markman* and *MediaCom,* to provide protection against arbitrary adjudication. *See* Pl.'s Mem. Supp. New Trial at 9-10.

While it is true that *Markman* and *MediaCom* set out a process for conducting claim construction, this Court has already noted the variety of approaches to the timing of claim construction. Several courts have waited until the trial began or even after the close of trial to give their claim constructions to the jury. *See, e.g.,* York Prods., Inc. v. Cent. Tractor Farm & Family Ctr., 99 F.3d 1568, 1571 (Fed.Cir.1996) ("After the trial had been underway about a week, the trial court distributed draft jury instructions which interpreted the claims."); Vitronics, 90 F.3d at 1580; Johns Hopkins Univ. v. CellPro, 894 F.Supp. 819, 826 (D.Del.1995).FN12 These differing approaches show no signs of violating due process rights because they are analogous to a court's interpretation of statutory law in the jury charge, which comes at the close of trial. Although this Court believes that an earlier claim construction is the better approach, nothing in the process envisioned by the Supreme Court in *Markman,* nor by this Court in *MediaCom,* requires a court to refuse to answer a post-trial jury question related to claim construction. Such a refusal, without good cause, could arguably itself constitute a violation of due process because it would leave the jury uncertain as to a point of law and result in a doubtful verdict. *See, e.g.,* Price v. Glosson Motor Lines, Inc., 509 F.2d 1033, 1035-36 (4th Cir.1975) (reversing because trial court did not clear up jury's confusion on contributory negligence after question from jury). Although this Court considered throughout the trial that the phrase "a break" was sufficiently clear for the jury to render its verdict and thus denied the parties' repeated requests for clarification, when the jury itself asked for an explanation, it became the duty of this Court to answer that legal question as best it could. *See* Bollenbach v. United States, 326 U.S. 607, 612-13, 66 S.Ct. 402, 90 L.Ed. 350 (1946) ("When a jury makes explicit its difficulties a trial judge should clear them away with concrete accuracy."), *examined in* Weeks v. Angelone, 528 U.S. 225, 120 S.Ct. 727, 145 L.Ed.2d 727 (2000); Elliott v. S.D. Warren Co., 134 F.3d 1, 7 (1st Cir.1998) ("As a general rule, the necessity for giving a supplementary instruction to the jury is a matter within the sound discretion of the trial court." [citations omitted]). *See generally* 2A Charles Alan Wright, Federal Practice and Procedure s. 502 (3d ed.2000).

FN12. Some commentators have suggested that claim construction actually may be most effective if rendered after the close of the trial so that the trial judge has full knowledge of the prior art, the history of the invention, and the overall commercial setting of the technology involved. *See, e.g.,* George E. Badenoch, *Proceeding in the Gray Area After* Markman, Intell. Prop. Strategist, June 1996, at 1, 4-5; David H. Binney & Toussaint L. Myricks, Patent Claim Interpretation After Markman -How Have the Trial Courts Adapted?, 38 IDEA 155, 162 (1997). This Court disagrees, but recognizes it as a legitimate and constitutional alternative approach to the timing of *Markman* hearings.

The Court's answer was consistent with the plain language of the construction used throughout the trial. Furthermore, MacNeill had several opportunities, both pre-trial and at the trial, to argue that the construction should be modified to read "a break or breaks" or "any number of breaks." Those attempts were denied by this Court because that interpretation was contrary to the Court's interpretation, giving a clear indication to MacNeill that only the singular form "a break" was to be used by the jury. MacNeill therefore had ample opportunity to argue its position on the matter and should not have been surprised that the jury question which emerged was answered in the affirmative without further hearing. There has been no Fifth Amendment violation.

6. Seventh Amendment Right of Trial by Jury

MacNeill also raises the issue that this Court's answer to jury question 2 violated its Seventh Amendment right to trial by jury. This Court has the utmost respect for and belief in the American jury system. *See* Ciulla v. Rigny, 89 F.Supp.2d 97, 101, 102 & n. 7 (D.Mass.2000). This Court takes MacNeill's allegations

quite seriously, but it ultimately concludes that answering the jury question as it did was a proper part of the jury trial process.

MacNeill's basis for invoking the Seventh Amendment lies in its presentation to the jury of facts on the basis of the original claims construction. *See* Pl.'s Mem. Supp. New Trial at 11-12. That original claims construction, MacNeill argues, allowed for a literal infringement challenge to Trisport's cleats with its multiple breaks. MacNeill presented Professor Durgin, an expert witness, whose testimony suggested that a cylindrical cuff with multiple breaks is an arguable interpretation of the original claims construction. Thus, goes the argument, this Court's clarification undermined the factual basis on which MacNeill had presented its evidence.

No experts testified to what the claim language itself meant because that was matter of law that *Markman* expressly assigns to the court. To the extent that any of MacNeill's experts, including Professor Durgin, testified that some cuffs have multiple breaks, this Court does not conceive of this as an interpretation of "a break" as used in the jury instruction but rather as evidence of the alternate conceptualization of FastTwist as being an independent band composed of posts. *See* Trial Tr. at 258. Moreover, such testimony is relevant to show that a cuff with more than one break could function in substantially the same manner and with substantially the same result as a cuff with "a break." *See* Kraft Foods, 203 F.3d at 1371. When the language of the claim construction was clarified in response to the jury question, Professor Durgin's testimony continued to have the same significance. Thus, this Court's clarification left untouched MacNeill's case based on a doctrine of equivalents theory. Nor did this Court's clarification for the jury constitute a finding of fact which deprived the jury of its role as factfinder. Under *Markman,* interpretation of the claims of the patent is clearly matter of law.

MacNeill's Seventh Amendment arguments can also be addressed by reference to several Federal Rules of Civil Procedure. Rule 56, governing summary judgment, may properly remove matter of fact from the jury in recognition that no reasonable jury would come to any conclusion other than the one the Court foresees. Despite this restriction of trial by jury, summary judgment does not conflict with the Seventh Amendment. *Cf.* Fidelity & Deposit Co. v. United States, 187 U.S. 315, 319-21, 23 S.Ct. 120, 47 L.Ed. 194 (1902). MacNeill asks this Court to declare that there has been a violation of the Seventh Amendment because the Court's answer to the jury question in its view took away the issue of literal infringement from the jury. To the extent this Court took an issue from the jury, however, it did so by making a *legal* determination-the Court did not impede the jury's fact finding role.

Furthermore, vehicles exist within the Federal Rules of Civil Procedure for directing the jury to a particular verdict, or even for taking the verdict away from a jury after it has been rendered. *See* Fed.R.Civ.P. 50 (governing judgment as matter of law). These mechanisms, when properly utilized, are constitutional. *E.g.,* Galloway v. United States, 319 U.S. 372, 388-94, 63 S.Ct. 1077, 87 L.Ed. 1458 (1943) (holding that directed verdict does not violate Seventh Amendment). Although the law does not change during the course of a trial, the clarification of issues and working out of the body of relevant evidence can result in a situation in which the jury's work ultimately is not needed on certain claims, although initially it may have appeared that a jury trial was required. Therefore, as a general matter, a district court may take theories and claims away from the jury even *after* the parties have presented evidence in reliance on those theories being alive during the case. The idea that MacNeill "relied" on the literal infringement claim being viable throughout the trial thus runs counter to the existence of Rule 50, which allows the court to make legal determinations that can modify the theories and claims that actually go to the jury.

In reflection of this Court's strong faith in the jury system, all of the theories and claims went to the jury. The Court, acting in its law defining and teaching role, clarified the claim language for the jury as needed in order to assist in its deliberations, and a verdict was rendered. MacNeill has enjoyed its right to a full and fair trial by jury and this Court therefore observes no violation of the Seventh Amendment.

IV. CONCLUSION

For the foregoing reasons, this Court on January 7, 2000, GRANTED Trisport's motion for summary judgment of non-infringement or, in the alternative, invalidity of Claims 7 and 8, but DENIED said motion in all other respects [Docket 53]; DENIED MacNeill's motion for partial summary judgment of patent validity of U.S. Patent No. 5,036,606 [Docket 59]; DENIED MacNeill's motion for partial summary judgment of infringement of Claims 1 through 3 [Docket 62]; DENIED MacNeill's motion for partial summary judgment of infringement of Claims 7 and 8 [Docket 65]; and DENIED MacNeill's motion for summary judgment for inducement and contributory infringement [Docket 68].

Furthermore, for the foregoing reasons, this Court hereby DENIES MacNeill's Motion for a New Trial [Docket 233]. Final judgment will enter.

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